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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,178	09/04/2002	Masaki Yamazaki	F-7262	8528
7590	10/07/2003		EXAMINER	
Jordan & Hamburg 122 East 42nd Street New York, NY 10168			LUGO, CARLOS	
			ART UNIT	PAPER NUMBER
			3677	

DATE MAILED: 10/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/018,178

Applicant(s)

YAMAZAKI, MASAKI

Examiner

Carlos Lugo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 11-26 is/are rejected.
- 7) ☒ Claim(s) 6-10 and 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 September 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:
 - Angles a and b are not illustrated in the drawings.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description:
 - Elements α , β and 51b is not described in the specification

A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:
 - The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.
4. **Claim 5 is rejected** under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites the limitation "said mating portion" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-4,11-15,17/15 and 18-26 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Japan No 56-143612 (JP '612) in view of US Pat No 5,626,449 to McKinlay (McKinlay '449).

Regarding claims 1,4,11,15,7/15 and 18-26, JP '612 discloses a screw mechanism having a member (5) to be tightened by screwing one screw member (11) on a tightening side to another screw member (12 and 13) characterized by making a pair of inclined surfaces (8) interposed between the two screw members in a mutually contacted state. The inclined surfaces circle around in a spiral form.

However, JP fails to disclose that the lead of the spiral is smaller than the lead of the screw.

McKinlay '449 teaches that is known in the art to have the lead of the spiral (34 and 36) is smaller than the lead of the screw (Col. 4 Lines 55-65).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a spiral surface, as taught by McKinlay '449, into a device as described by JP '612, in order to reduce the amount of torque applied to the assembly.

As to claim 2, JP '612 discloses that the inclined surfaces are formed at a pair of washers (2a and 2b).

As to claim 3, JP '612 fails to disclose that the inclined surface can be formed on the screw member and the other one on a washer.

McKinlay '449 teaches that the inclined surface can be formed on the screw member (14) and the other one on a washer (16).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the inclined surfaces, as taught by McKinlay '449, into a device as described by JP '612, because it is a design choice that will not affect the threaded engagement.

As to claims 12-14, JP '612, as modified by McKinlay '449, discloses a method of tightening a screw mechanism.

7. **Claim 5 is rejected** under 35 U.S.C. 103(a) as being unpatentable over Japan No 56-143612 (JP '612) in view of US Pat No 5,626,449 to McKinlay (McKinlay '449) and further in view of US Pat No 5,222,849 to Walton.

JP '612, as modified by McKinlay '449, fails to disclose code or symbols formed on the washer.

Walton teaches that is known in the art to have a threaded fastener assembly comprising means (28 and 40) to provide visual indication.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have means for visual indication, as taught by Walton, into a

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device as described by JP '612, as modified by McKinlay '449, in order to provide visual indication of the load sumministrated.

8. **Claims 16 and 17/16 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Japan No 56-143612 (JP '612) in view of US Pat No 5,626,449 to McKinlay (McKinlay '449) and further in view of US Pat No 5,180,268 to Richardson.

JP '612, as modified by McKinlay '449, fails to disclose that the washers include stoppers.

Richardson teaches that is known in the art to have washers (24 and 26) having stoppers (60 and 62).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have stoppers, as taught by Richardson, into a device as described by JP '612, as modified by McKinlay '449, in order to prevent the washer from rotating (opposite direction from the tightening direction).

Allowable Subject Matter

9. **Claims 6,7 and 27 are objected** to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. **Claims 8-10** will be allowed as depending from claims 6 and 7.

Reasons For Allowance

10. The following is an examiner's statement of reasons for allowable subject matter:

Claim 6 presents allowable subject matter over the prior art of record because the teachings of the references taken as a whole do not teach or render obvious the

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combination set forth, including that the pair of tier faces are spaced when the inclined surfaces are in contact.

JP '612, as modified by McKinlay '449, discloses that the pair of tier faces are in contact when the inclined surfaces are in contact.

Claim 7 presents allowable subject matter over the prior art of record because the teachings of the references taken as a whole do not teach or render obvious the combination set forth, including that the outer circumference of the washers includes a graduation to have a perception of the interval size between the tier faces. Walton teaches that is known in the art to have a threaded fastener assembly comprising marks (28 and 40) to provide visual indication. However, marks are to provide a visual indication of the load sumministrated.

Claim 27 presents allowable subject matter over the prior art of record because the teachings of the references taken as a whole do not teach or render obvious the combination set forth, including that the assembly further includes a latching ring having a tongue piece.

Claims 8-10 will be allowed as depending from claims 6 and 7.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Lugo whose telephone number is 703-305-9747. The examiner can normally be reached on 9-6pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Swann can be reached on 703-306-4115. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5771.

Carlos Lugo
Examiner
Art Unit 3677

September 30, 2003.



J. J. SWANN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600